

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An electrolyte composition comprising an ionic liquid and conductive particles ~~as main components~~.

2. (currently amended): The electrolyte composition according to claim 1 further comprising a gelling agent made into a gel.

3. (original): The electrolyte composition according to claim 1, wherein a content of the conductive particles is not less than 0.05% by weight and not more than 10% by weight with respect to a total amount of the electrolyte composition.

4. (original): The electrolyte composition according to claim 1, wherein a content of the conductive particles is not less than 0.05% by weight and not more than 10% by weight with respect to the ionic liquid.

5. (currently amended): The electrolyte composition according to claim 1, wherein the conductive particles ~~are made of~~ comprise a material containing carbon as a main component.

6. (original): The electrolyte composition according to claim 5, wherein the material containing carbon as a main component is one member or a mixture of a plurality of members selected from the group consisting of carbon nanotubes, carbon fibers, and carbon black.

7. (currently amended): The electrolyte composition according to claim 6, wherein the carbon nanotubes are either one of or a mixture of a single-wall carbon nanotubes and multi-wall carbon nanotubes.

8. (original): A photoelectric conversion element comprising the electrolyte composition according to claim 1 contained as an electrolyte.

9. (original): A photoelectric conversion element, comprising:
a working electrode, the working electrode comprising an electrode substrate and an oxide semiconductor porous film formed on the electrode substrate and sensitized with a dye;
a counter electrode disposed opposing the working electrode; and
an electrolyte layer made of the electrolyte composition according to claim 1 provided between the working electrode and the counter electrode.

10. (original): A dye-sensitized photovoltaic cell, comprising:

a working electrode, the working electrode comprising an electrode substrate and an oxide semiconductor porous film formed on the electrode substrate and sensitized with a dye; a counter electrode disposed opposing the working electrode; and an electrolyte layer made of the electrolyte composition according to claim 1 provided between the working electrode and the counter electrode.

11. (original): An electrolyte composition comprising an ionic liquid and oxide semiconductor particles.

12. (original): The electrolyte composition according to claim 11, further comprising conductive particles.

13. (currently amended): The electrolyte composition according to claim 11 further comprising a gelling agent made into a gel.

14. (original): The electrolyte composition according to claim 11, wherein the oxide semiconductor particles are one member or a mixture of two or more members selected from the group consisting of TiO₂, SnO₂, WO₃, ZnO, ITO, BaTiO₃, Nb₂O₅, In₂O₃, ZrO₂, Ta₂O₅, La₂O₃, SrTiO₃, Y₂O₃, Ho₂O₃, Bi₂O₃, CeO₂, and Al₂O₃.

15. (original): The electrolyte composition according to claim 14, wherein the TiO₂ is either one of or a mixture of titanium oxide nanotubes and titanium oxide nanoparticles.

16. (currently amended): The electrolyte composition according to claim 12, wherein the conductive particles ~~are made of~~ comprise a material containing carbon as a main component.

17. (original): The electrolyte composition according to claim 16, wherein the material containing carbon as a main component is one member or a mixture of two or more members selected from the group consisting of carbon nanotubes, carbon fibers, and carbon black.

18. (currently amended): The electrolyte composition according to claim 17, wherein the carbon nanotubes are either one of or a mixture of ~~a~~ single-wall carbon nanotubes and multi-wall carbon nanotubes.

19. (original): The electrolyte composition according to claim 11, wherein a compounding amount of the oxide semiconductor particles is not less than 0.05% by weight and not more than 70% by weight with respect to a total amount of the electrolyte composition.

20. (original): The electrolyte composition according to claim 12, wherein a total compounding amount of the oxide semiconductor particles and the conductive particles is not less than 0.05% by weight and not more than 70% by weight with respect to a total amount of the electrolyte composition.

21. (original): The electrolyte composition according to claim 11, wherein a compounding amount of the oxide semiconductor particles is not less than 0.05% by weight and not more than 70% by weight with respect to the ionic liquid.

22. (original): The electrolyte composition according to claim 12, wherein a total compounding amount of the oxide semiconductor particles and the conductive particles is not less than 0.05% by weight and not more than 70% by weight with respect to the ionic liquid.

23. (original): A photoelectric conversion element comprising the electrolyte composition according to claim 11 contained as an electrolyte.

24. (original): A photoelectric conversion element, comprising:
a working electrode, the working electrode comprising an electrode substrate and an oxide semiconductor porous film formed on the electrode substrate and sensitized with a dye;
a counter electrode disposed opposing the working electrode; and
an electrolyte layer made of the electrolyte composition according to claim 11 provided between the working electrode and the counter electrode.

25. (original): A dye-sensitized photovoltaic cell, comprising:
a working electrode, the working electrode comprising an electrode substrate and an oxide semiconductor porous film formed on the electrode substrate and sensitized with a dye;
a counter electrode disposed opposing the working electrode; and

an electrolyte layer made of the electrolyte composition according to claim 11 provided between the working electrode and the counter electrode.

26. (original): An electrolyte composition comprising an ionic liquid and insulating particles.

27. (currently amended): The electrolyte composition according to claim 26 further comprising a gelling agent made into a gel.

28. (currently amended): The electrolyte composition according to claim 26, wherein the insulating particles are one member or a mixture of ~~two or more~~ both members selected from the group consisting of diamond and boron nitride.

29. (original): The electrolyte composition according to claim 26, wherein a compounding amount of the insulating particles is no less than 0.05% by weight and no more than 70% by weight with respect to a total amount of the electrolyte composition.

30. (original): A photoelectric conversion element comprising the electrolyte composition according to claim 26 as an electrolyte.

31. (original): A photoelectric conversion element, comprising:
a working electrode, the working electrode comprising an electrode substrate and an

oxide semiconductor porous film formed on the electrode substrate and sensitized with a dye;
a counter electrode disposed opposing the working electrode; and
an electrolyte layer made of the electrolyte composition according to claim 26 provided
between the working electrode and the counter electrode.

32. (original): A dye-sensitized photovoltaic cell, comprising:
a working electrode, the working electrode comprising an electrode substrate and an
oxide semiconductor porous film formed on the electrode substrate and sensitized with a dye;
a counter electrode disposed opposing the working electrode; and
an electrolyte layer made of the electrolyte composition according to claim 26 provided
between the working electrode and the counter electrode.

33. (new): The electrolyte composition according to claim 5, wherein the material
containing carbon as a main component includes carbon nanotubes, carbon fibers, carbon black,
and the like.

34. (new): The electrolyte composition according to claim 16, wherein the material
containing carbon as a main component includes carbon nanotubes, carbon fibers, carbon black,
and the like.

35. (new): The electrolyte composition according to claim 1 wherein the ionic liquid is a
room temperature molten salt that is liquid at room temperature.

36. (new): The electrolyte composition according to claim 33 wherein the molten salt comprises a cation selected from the group consisting of a compound containing a quaternized nitrogen atom, a quaternary imidazolium derivative, a quaternary pyridinium derivative, and a quaternary ammonium derivative.

37. (new): The electrolyte composition according to claim 35 wherein the molten salt comprises an anion selected from the group consisting of BF_4^- , PF_6^- , $\text{F}(\text{HF})_n^-$, bis(trifluoromethylsulfonyl)imide $[\text{N}(\text{CF}_3\text{SO}_2)_2^-]$, and iodide ions.

38. (new): The electrolyte composition according to claim 1 wherein the conductive particles have a specific resistance of $1.0 \times 10^{-2} \Omega \cdot \text{cm}$ or less.

39. (new): The electrolyte composition according to claim 1 further comprising oxidation-reduction pairs.